

REMARKS

Claims 1-43 are pending in the present application. Claims 1, 8-10, 12, 15, 22-24, 26, 29, 36, 38, 39 and 41-43 have been amended herewith. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 112, Second Paragraph

The Examiner rejected Claim 38 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. This rejection is respectfully traversed.

Applicants have amended Claim 38 to recite a computer program product instead of a method. Therefore the rejection of Claim 38 under 35 U.S.C. § 112, second paragraph has been overcome.

II. 35 U.S.C. § 101

The Examiner rejected Claims 1-43 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. This rejection is respectfully traversed.

With respect to independent method Claims 1 and 41, such claims have been amended to specifically recite use of a data processing machine to perform the recited steps. In addition, Applicants urge that Claims 1 and 41 produce a useful, concrete and tangible result by modifying selection of entries in one or more of the datasets, such modification being based upon comparing the first distribution and the second distribution to identify a discrepancy between the first distribution and the second distribution with respect to data network geographical information (Claim 1), and training the predictive algorithm for use in predicting customer behavior based upon obtained data network geographic information (Claim 41). Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101. MPEP 2106(II)(A).

As to Claims 15 and 42, such claims expressly recite an apparatus, and machines (an apparatus being a type of machine) are statutorily recognized by 35 U.S.C. 101.

As to Claims 29 and 43, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. MPEP 2106(IV)(B)(1)(a).

Therefore the rejection of Claims 1-43 under 35 U.S.C. § 101 has been overcome.

III. 35 U.S.C. § 102, Anticipation

The Examiner rejected Claims 1, 4, 7-9, 12-15, 18, 21-23, 25-29, 32, 35, 36 and 38-43 under 35 U.S.C. § 102(b) as being anticipated by Menon et al. (U.S. 5,537,488). This rejection is respectfully traversed.

For a prior art reference to anticipate in terms of 35 U.S.C. 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990) (emphasis added by Applicants). Applicants will now show how every element of the claimed invention is not identically shown in a single reference.

With respect to Claim 1, such claim recites a step of "comparing the first distribution and the second distribution to identify a discrepancy between the first distribution and the second distribution with respect to data network geographical information". As can be seen, this step is directed to comparing of two distributions (a first distribution and a second distribution) with respect to data network geographic information. Such step advantageously facilitates an ability to modify selection of entries in one or more of the training data set and the testing data set based on such discrepancy. In rejecting Claim 1, the Examiner cites Menon col. 20, lines 61-64 as teaching this claimed 'comparing' step. Applicants show that there, Menon states:

"receiving at least one test input pattern of the data type from a subject during a testing operation;
computing a correlation between a category definition and each test input pattern;"

As can be seen, this cited passage describes two steps, a receiving step and a computing step. The Menon receiving step receives at least one test input pattern from a subject during a testing operation. The Menon computing step computes a correlation between (1) a category definition and (2) each test input pattern. The category definition is described by Menon at col. 1, lines 21-43 and col. 20, lines 48-54 to be a definition for a given category set of training input patterns, the training patterns being received from a plurality of subject classes during a training operation to identify particular features or views of the subjects for pattern recognition (col. 1, lines 22-58). The test input pattern is described by Menon at col. 2, lines 43-51 to be frames of data from a subject (such as an automobile or face). While it is possible that Menon's test input patterns may suggest the claimed testing data set, and Menon's training input patterns organized as category sets may suggest the claimed training data set, there is no teaching (or suggestion) of *comparing* test input patterns and training input patterns to identify discrepancies between such patterns *with respect to data network geographic information*. Thus, it is urged that Claim 1 has been erroneously rejected as every element of the claimed invention is not identically shown in a single reference.

Applicants initially traverse the rejection of Claims 4, 7-9 and 12-14 for reasons given above with respect to Claim 1 (of which Claims 4, 7-9 and 12-14 depend upon).

Further with respect to Claim 8, Applicants have amended such claim to emphasize the characteristics of the claimed customer information database. The cited reference does not teach or suggest any type of use of customer information or an associated database. Thus, it is further urged that Claim 8 is not anticipated by the cited reference.

Further with respect to Claim 9, Applicants urge that the cited reference does not teach the claimed step of "comparing at least one of the first distribution and the second distribution to a distribution of a customer database". As can be seen, this claim is directed to comparing one or more of the first and second distributions with another distribution – the distribution of a customer database. The cited reference does not teach (or otherwise suggest) a *distribution* of a customer database, and hence it necessarily follows that it does not teach (or otherwise suggest) any comparing step being made with such (missing) distribution. In rejecting Claim 9, the Examiner cites Menon col. 6, line

57 – column 7, line 21. Applicants urge that this passage describes details of how to group training patterns into categories in order to generate a training histogram, as claimed by Menon in Claim 24, col. 20, lines 55-60. This passage deals with training patterns and the labeling of these training patterns' associated categories. The calculations described are only with respect to training patterns – albeit organized into different groups or categories. Importantly, there is no teaching (or suggestion) of comparing such training patterns to a distribution of a customer database, as expressly recited in Claim 9. Thus, it is further shown that Claim 9 is not anticipated by the cited reference as every element of the claimed invention recited therein is not identically shown in a single reference.

Further with respect to Claim 12, such claim recites a further refinement of the claimed 'modifying' step recited in Claim 1, and specifically recites a feature of "wherein modifying selection of entries in one or more of the training data set and the testing data set includes changing one of a random selection algorithm and a seed value for a random selection algorithm". As can be seen, this feature recites changing of either (i) a random selection algorithm or (ii) a seed value for such random selection algorithm. In rejecting Claim 12, the Examiner cites Menon col. 2, lines 4-20 as teaching this claimed feature. Applicants urge that this cited passage describes forming different categories for different classes of features for things such as automobile tires or appearances of a person. There is no mention of any type of random selection algorithm, and hence it necessarily follows there is no teaching of *changing one of a random selection algorithm and a seed value for a random selection algorithm*, as expressly recited in Claim 12. Thus, it is further shown that Claim 12 is not anticipated by the cited reference.

With respect to Claims 15, 18, 21-23 and 25-28, Applicants initially traverse for similar reasons to those given above with respect to Claim 1.

Further with respect to Claim 22, Applicants traverse for similar reasons to the further reasons given above with respect to Claim 8.

Further with respect to Claim 23, Applicants traverse for similar reasons to the further reasons given above with respect to Claim 9.

Further with respect to Claim 26, Applicants traverse for similar reasons to the further reasons given above with respect to Claim 12.

With respect to Claims 29, 32, 35, 36 and 38-43, Applicants initially traverse for similar reasons to those given above with respect to Claim 1.

Further with respect to Claim 36, Applicants traverse for similar reasons to the further reasons given above with respect to Claim 9.

Further with respect to Claim 39, Applicants traverse for similar reasons to the further reasons given above with respect to Claim 12.

With respect to Claim 41, Applicants urge that the cited reference does not teach (or otherwise suggest) the claimed steps of "obtaining *data network geographical information* regarding a plurality of customers", training a predictive algorithm *using the data network geographical information*", and "using the predictive algorithm to predict customer behavior *based on the data network geographical information*" (emphasis added by Applicants). As can be seen, each step of Claim 41 specifically recites operational steps that relate to *data network geographic information* regarding a plurality of customers. In rejecting Claim 41, the Examiner relies upon the same reasoning given in rejecting Claim 1. Applicants urge that Claim 1 and Claim 41 are different, and therefore the basis for rejecting Claim 1 does not apply to Claim 41. Claims 1 and 41 are reproduced herewith, to demonstrate how these two claims are different.

Claim 1. A method of selecting data sets for use with a predictive algorithm based on data network geographical information, comprising:

- generating a first distribution of a training data set;
- generating a second distribution of a testing data set;
- comparing the first distribution and the second distribution to identify a discrepancy between the first distribution and the second distribution with respect to data network geographical information; and

Claim 41. A method of predicting customer behavior based on data network geographical influences, comprising:

- obtaining data network geographical information regarding a plurality of customers;
- training a predictive algorithm using the data network geographical information; and
- using the predictive algorithm to predict customer behavior based on the data network geographical information.

modifying selection of entries in one or more of the training data set and the testing data set based on the discrepancy between the first distribution and the second distribution.

As can be seen, Claim 1 is directed to a method of selecting datasets for use with a predictive algorithm, whereas Claim 41 is directed to a method of predicting customer behavior based on data network geographic influences. Claim 41 recites a step of *obtaining data network geographic information* regarding a plurality of customers. Claim 1 does not recite such a step, and thus the Examiner, in relying on the reasoning of Claim 1 in rejecting Claim 41, has failed to establish a teaching by Menon of the claimed 'obtaining' step recited in Claim 41. Still further, Claim 41 recites a step of *training a predictive algorithm* using this data network geographic information. Claim 1 does not recite such a step, and thus the Examiner, in relying on the reasoning of Claim 1 in rejecting Claim 41, has failed to establish a teaching by Menon of the claimed 'training' step recited in Claim 41. Still further, Claim 41 recites a step of *using the predictive algorithm to predict customer behavior* based on the data network geographical information. Claim 1 does not recite such a step, and thus the Examiner, in relying on the reasoning of Claim 1 in rejecting Claim 41, has failed to establish a teaching by Menon of the claimed customer behavior predicting step recited in Claim 41. Thus, the Examiner has failed to establish, or even allege, a teaching of each step recited in Claim 41. Accordingly, Applicants urge that Claim 41 has been erroneously rejected, as every element of Claim 41 is not identically shown in a single reference. *In re Bond*, Id.

Applicants traverse the rejection of Claims 42 and 43 for similar reasons to those given above with respect to Claim 41.

Therefore, the rejection of Claims 1, 4, 7-9, 12-15, 18, 21-23, 25-29, 32, 35, 36 and 38-43 under 35 U.S.C. § 102(b) has been overcome.

IV. 35 U.S.C. § 103, Obviousness

The Examiner rejected Claims 2, 3, 5, 6, 10, 11, 16, 17, 19, 20, 24, 30, 31, 33, 34 and 37 under 35 U.S.C. § 103(a) as being unpatentable over Menon et al. (U.S. 5,537,488) in view of Glommen et al (U.S. 6,393,479). This rejection is respectfully traversed.

With respect to Claim 2, Applicants urge that none of the cited references teach or suggest *use of* data network geographic information – such as the number of data network links from a customer data network geographic location to web site data network geographic location – to identify discrepancies which are then used when modifying selections of entries for one or more of the training data set and the testing data set. In rejecting Claim 2, the Examiner acknowledges that Menon does not teach that the distributions include a number of data network links. However, the Examiner states that the cited Glommen reference teaches an Internet traffic flow analysis system which monitors visitor travel through websites. Even assuming such assertion to be true, Applicants urge that the cited Glommen reference does not teach or otherwise suggest *use of* such traffic flow analysis in any type of discrepancy compare step, or *use of* such traffic flow analysis in any type of data set entry selection modification step, as expressly recited in the combination of Claim 1 and Claim 2. Glommen merely teaches that his traffic analysis results are recorded in a log file/cookie (col. 1, lines 63-64; col. 5, lines 2-10). There is no teaching of any subsequent use of such information with any type of predictive algorithm. The only suggestion for such use comes from Applicants own patent specification, which is improper hindsight analysis. It is error to reconstruct the patentee's claimed invention from the prior art by using the patentee's claims as a "blueprint". When prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight obtained from the invention itself. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 227 USPQ 543 (Fed. Cir. 1985). In addition, because Menon's teachings are directed to pattern recognition of features of innate objects - and is not in anyway related to determining or using data network characteristics such as data network geographic information – there would have been no motivation to combine the teachings of such dissimilar and non-related teachings, which are non-analogous art. Still further, when an

obviousness determination is based on multiple prior art references, there must be a showing of some "teaching, suggestion, or reason" to combine the references. "...absence of such suggestion to combine is dispositive in an obviousness determination". *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 42 USPQ2d 1378 (Fed. Cir. 1997). The Examiner states that Menon would use Glommen's internet traffic tool to create a traffic flow testing and training data set which would predict customer's travel behavior through the Internet, and advertisers would use this internet traffic tool to better target advertisement to the users. These statements by the Examiner further evidence improper hindsight analysis, as neither the teachings of Menon nor Glommen are directed to targeting advertisement to Internet user's. This reasoning for combining such non-analogous teachings must therefore be coming from Applicants' own patent specification, which again is improper hindsight analysis. *Interconnect Planning Corp. v. Feil*, supra.

Applicants have thus shown that the cited references have been improperly combined (non-analogous art and improper hindsight analysis), and even with such improper combination, there are still missing claimed elements (use of data network geographical information to identify discrepancies, and modifying one or more data sets based upon such discrepancies) – strongly evidencing non-obviousness of Claim 2.

Applicants traverse the rejection of Claim 3 by showing that none of the cited references teach or suggest the claimed feature of "wherein the first distribution and the second distribution are distributions of *a size of a click stream for arriving at a web site* data network geographical location". Glommen teaches traffic analysis *internal to* a web site (col. 1, lines 23-25; col. 1, lines 63-65; col. 4, lines 3-5; col. 4, lines 25-31). There is no teaching of any ability for capturing or analyzing click streams for *arriving at* a web site, as expressly recited in Claim 3. While Glommen alludes to a given website spanning multiple servers at col. 5, lines 16-22, the data capture provided by Glommen is still *internal to a given web site*. Thus, it is urged that Claim 3 is not obvious in view of the cited references, as there are claimed features not taught or suggested by the cited references. To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. *See also, In re Royka*, 490 F.2d 580 (C.C.P.A. 1974) (emphasis added by Applicants).

Applicants further traverse the rejection of Claim 3 for similar reasons to those described above with respect to Claim 2 and the non-analogous art and improper hindsight analysis arguments.

Applicants traverse the rejection of Claim 5 for similar reasons to those given above with respect to Claim 2.

Applicants traverse the rejection of Claim 6 for similar reasons to those given above with respect to Claim 3.

Applicants traverse the rejection of Claim 10 for similar reasons to those given above with respect to Claims 2 and 3.

With respect to Claim 11, Applicants urge that such claim has been erroneously rejected under 35 U.S.C. § 103(a) as being unpatentable over Menon in view of Glommen, as the Examiner does not cite or make any use of the Glommen teachings in rejecting Claim 11. Further clarification is requested as to the statutory basis for rejecting Claim 11.

Still further with respect to Claim 11, Applicants urge that none of the cited references teach or suggest the claimed steps of "generating a composite data set from the training data set and the testing data set", or "generating a composite distribution from the composite data set". In rejecting Claim 11, the Examiner cites Menon col. 40, lines 40-45 as teaching both of these claimed steps. Applicants urge that neither cited reference includes a col. 40, and hence the Examiner has failed to establish a *prima facie* showing of obviousness with respect to Claim 11 as the cited passage being used for such rejection is non-existent. In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.* To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. *See also, In re Royka*, 490 F.2d 580 (C.C.P.A. 1974). If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Applicants traverse the rejection of Claims 16 and 30 for similar reasons to those given above with respect to Claim 2.

Applicants traverse the rejection of Claims 17 and 31 for similar reasons to those given above with respect to Claim 3.

Applicants traverse the rejection of Claims 19 and 33 for similar reasons to those given above with respect to Claim 5.

Applicants traverse the rejection of Claims 20 and 34 for similar reasons to those given above with respect to Claim 6.

Applicants traverse the rejection of Claims 24 and 37 for similar reasons to those given above with respect to Claim 10.

Therefore, the rejection of Claims 2, 3, 5, 6, 10, 11, 16, 17, 19, 20, 24, 30, 31, 33, 34 and 37 under 35 U.S.C. § 103(a) has been overcome.

V. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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